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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,782	01/26/2001	Alexandra D. Bermel	82111HEC	8268

7590 06/13/2003

Patent Legal Staff
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EXAMINER

- SCHWARTZ, PAMELA R

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 06/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/770,782

Applicant(s)

BERMEL ET AL.

Examiner

Pamela R. Schwartz

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

1. Claims 1-4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasahara et al. (EP 1002660) in view of any of Brown (US2002/0086909), Akiya et al. (5,041,328) and Darsillo et al. (6,365,264). The primary reference discloses an ink jet recording paper having a support and an ink absorptive layer including binder, fine particles and a cationic polymer (see the Abstract). The particles may be alumina and have an average primary particle diameter of not more than 30 nm with secondary aggregated particles of not more than 200 nm (see p. 5, lines 30-47). The binder may be polyvinyl alcohol (see page 11, lines 43-50). The hardener may be included in ratios to binder of between 5 and 500 mg per g binder (page 12, lines 15-35).

The primary reference does not specifically disclose the use of fumed alumina. The secondary references each teach the use of fumed alumina in recording media (see Darsillo et al. col. 4, line 59 to col. 5, line 2, and col. 5, lines 43-47, col. 9, line 42 (for polyvinyl alcohol binder) to col. 10, line 29 (for hardener), and Tables 10 and 12)(see Akiya et al., col. 9, lines 50-58 (gas phase method alumina is considered to be the same as pyrogenic alumina) and (see Brown, paragraphs 22 and 22 (disclosing fumed alumina and use of the dispersion to form ink jet media). Darsillo et al. disclose both silica and alumina and that anionically charged particles can be treated to make them ^{cationic} ~~anionic~~. In addition, at column 4, Darsillo et al. indicate that the fumed particles are responsible for providing ink absorption as well as a glossy coating. Therefore, it would have been obvious to use a fumed alumina as the alumina of the primary reference in order to enhance gloss of the coating produced.

Art Unit: 1774

For claim 6, see page 16, lines 10-13, for claim 8, see page 12, lines 10-14.

With respect to claim 7, the cationic polymer of the reference will act as a mordanting agent for the dye and therefore is considered to be a mordant.

2. Claims 1 and 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kasahara et al. (EP 1002660) in view of any of Brown (US2002/0086909), Akiya et al. (5,041,328) and Darsillo et al. (6,365,264) and further in view of Tokunaga et al. (6,403,162). Tokunaga et al. disclose a similar ink jet recording medium including polyvinyl alcohol and a hardener in the ink receptive layer. (see col. 6, line 49 to col. 7, line 45). The reference also teaches hardeners for polyvinyl alcohol including aldehydes, boric acids and borates, epoxy hardeners and dihydroxy dioxane. Since the examples of hardeners of the primary reference include many of the same hardeners recited by Tokunaga et al. (i.e. those listed above, excluding the dioxane compound), it would have been obvious to one of ordinary skill in the art to use dihydroxy dioxane as the hardener of the primary reference because it is taught as an equivalent cross-linking agent for polyvinyl alcohol by the secondary art.

3. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela R. Schwartz whose telephone number is 703-308-2424. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on (703) 308-0449. The fax

Art Unit: 1774

phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

PRSchwartz
June 10, 2003



PAMELA SCHWARTZ
PRIMARY EXAMINER